

Ludger

Certificate of Analysis

IgG Glycan Library

Cat. #: CLIBN-IGG-01

Batch #: B337-02

Size: approx 25 µg

Expiry: 20 Oct 2022

Description: A mixture of fucosylated, bi-antennary glycan standards with variable sialylation released from human IgG antibody glycoprotein.

Source: The glycans in this product are released from an IgG standard that is purified from human serum. IgG exists in a variety of glycoforms containing bi-antennary oligosaccharides with variable sialylation.

Form: Dry. Lyophilised powder.

Storage: Refrigerate (-20°C) both before and after dissolving. This product is stable for at least 5 years as supplied.

Shipping: The product is shipped at ambient temperature.

Handling: Once dissolved, avoid repeated thawing and refreezing, storage over 3 h at room temperature or above, exposure to light and long term exposure to acid as these will cause glycan desialylation.

Safety: This product is non-hazardous and has been purified from natural sources certified to be free of all hazardous material including pathogenic biological agents.

For research use only. Not for human or drug use

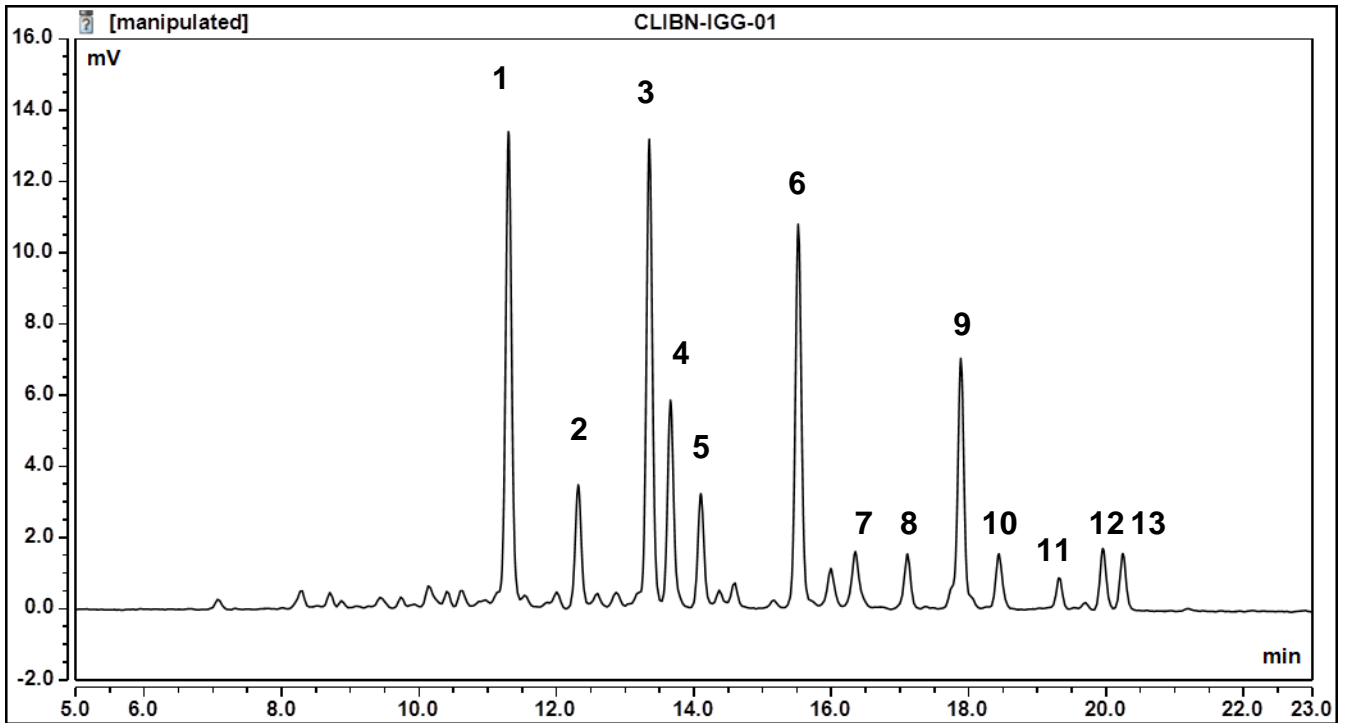


Figure 1: BEH UPLC Profile of 2AB Labeled IgG N-Glycans released from Human IgG antibody by N-mode hydrazinolysis (Cat. #: CLIB-IGG-01, Batch #B337-02). Table 1 shows peak assignments.

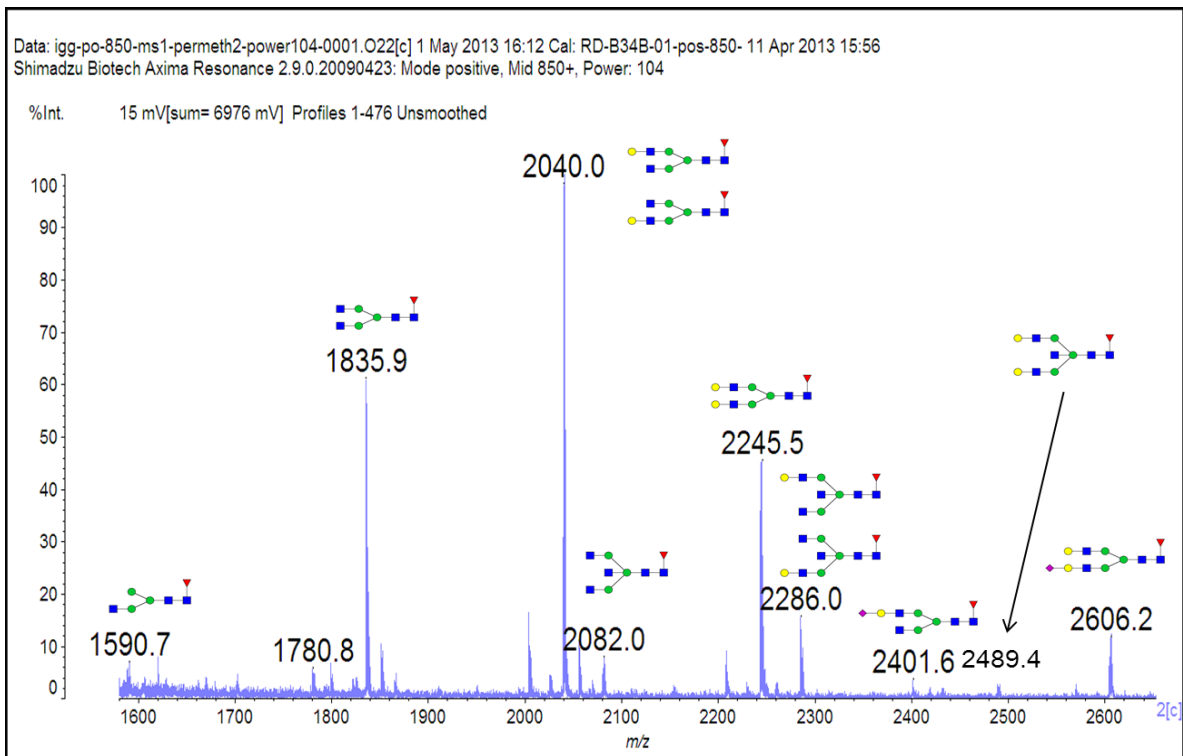


Figure 2: Mass spectrum of permethylated IgG N-Glycans released from Human IgG antibody by N-Mode hydrazinolysis. Analysis performed on Shimadzu Biotech Resonance MALDI-Ion Trap with DHB matrix. Table 1 shows peak assignments.

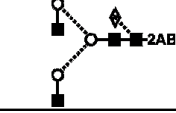
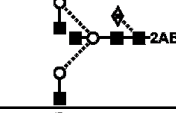
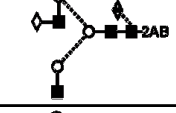




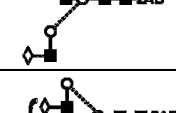

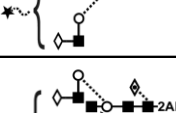



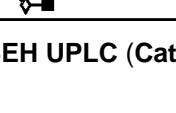
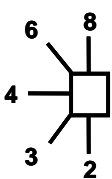
Peak ID	Full name	Short name	Structure	% Relative peak area
1	F(6)A2	FA2		17.43
2	F(6)A2B	FA2B		4.51
3	F(6)A2[6]G(4)1	FA2G1		17.46
4	F(6)A2[3]G(4)1	FA2G1		7.78
5	F(6)A2[6]BG(4)1	FA2BG1		4.18
	F(6)A2[3]BG(4)1	FA2BG1		
6	F(6)A2G(4)2	FA2G2		15.35
7	F(6)A2BG(4)2	FA2BG2		2.62
8	A2G(4)2S1	A2G2S1		2.30
9	F(6)A2G(4)2S1	FA2G2S1		10.61
10	F(6)A2BG(4)2S1	FA2BG2S1		2.32
11	A2G(4)2S2	A2G2S2		1.12
12	F(6)A2G(4)2S2	FA2G2S2		2.41
13	F(6)A2BG(4)2S2	FA2BG2S2		2.19

Table 1: Structures and names of each peak from the BEH UPLC (Cat. #: CLIB-IGG-01, Batch #B337-02)

Nomenclature

<i>Symbol for sugar</i>	<i>Linkage position</i>
□ Glc	
■ GlcNAc	
★ NeuNAc	
◇ Gal	
◆ GalNAc	
◊ Fuc (deoxy galactose)	
○ Man	
	<i>Linkage type</i>
	— β-linkage
 α-linkage

Structure Abbreviations

All N-glycans have two core GlcNAcs; F at the start of the abbreviation indicates a core fucose, (6) after the F indicates that the fucose is α 1-6 linked to the inner GlcNAc; Mx, number (x) of mannose on core GlcNAcs; Ax, number of antenna (GlcNAc) on trimannosyl core; A2, biantennary with both GlcNAcs as α 1-2 linked; A3, triantennary with a GlcNAc linked α 1-2 to both mannose and the third GlcNAc linked α 1-4 to the α 1-3 linked mannose; A3', triantennary with a GlcNAc linked α 1-2 to both mannose and the third GlcNAc linked α 1-6 to the α 1-6 linked mannose; A4, GlcNAcs linked as A3 with additional GlcNAc α 1-6 linked to α 1-6 mannose; B, bisecting GlcNAc linked α 1-4 to α 1-3 mannose; Gx, number (x) of linked galactose on antenna, (4) or (3) after the G indicates that the Gal is α 1-4 or α 1-3 linked; [3]G1 and [6]G1 indicates that the galactose is on the antenna of the α 1-3 or α 1-6 mannose; Sx, number (x) of sialic acids linked to galactose; the numbers 3 or 6 in parentheses after S indicate whether the sialic acid is in an α 2-3 or α 2-6 linkage.